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AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Withdrawn) A peptide compound of the formula (I) [SEQ. ID. NO. 4]:

Xaa₁ Xaa₂ Xaa₃ Gly Xaa₅ Xaa₆ Xaa₇ Xaa₈ Xaa₉ Xaa₁₀
Xaa₁₁ Xaa₁₂ Xaa₁₃ Xaa₁₄ Xaa₁₅ Xaa₁₆ Xaa₁₇ Ala Xaa₁₉ Xaa₂₀
Xaa₂₁ Xaa₂₂ Xaa₂₃ Xaa₂₄ Xaa₂₅ Xaa₂₆ Xaa₂₇ Xaa₂₈-Z₁; wherein

Xaa₁ is His, Arg or Tyr;

Xaa₂ is Ser, Gly, Ala or Thr;

Xaa₃ is Asp or Glu;

Xaa₅ is Ala or Thr;

Xaa₆ is Ala, Phe, Tyr or naphthylalanine;

Xaa₇ is Thr or Ser;

Xaa₈ is Ala, Ser or Thr;

Xaa₉ is Asp or Glu;

Xaa₁₀ is Ala, Leu, Ile, Val, pentylglycine or Met;

Xaa₁₁ is Ala or Ser;

Xaa₁₂ is Ala or Lys;

Xaa₁₃ is Ala or Gln;

Xaa₁₄ is Ala, Leu, Ile, pentylglycine, Val or Met;

Xaa₁₅ is Ala or Glu;

Xaa₁₆ is Ala or Glu;

Xaa₁₇ is Ala or Glu;

Xaa₁₉ is Ala or Val;

Xaa₂₀ is Ala or Arg;

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Xaa₂₁ is Ala or Leu;
Xaa₂₂ is Phe, Tyr or naphthylalanine;
Xaa₂₃ is Ile, Val, Leu, pentylglycine, tert-butylglycine
or Met;
Xaa₂₄ is Ala, Glu or Asp;
Xaa₂₅ is Ala, Trp, Phe, Tyr or naphthylalanine;
Xaa₂₆ is Ala or Leu;
Xaa₂₇ is Ala or Lys;
Xaa₂₈ is Ala or Asn;
Z₁ is -OH,
-NH₂,
Gly-Z₂,
Gly Gly -Z₂
Gly Gly Xaa₃₁-Z₂,
Gly Gly Xaa₃₁ Ser-Z₂,
Gly Gly Xaa₃₁ Ser Ser-Z₂,
Gly Gly Xaa₃₁ Ser Ser Gly-Z₂,
Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂,
Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂,
Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂ or
Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈-Z₂;

wherein

Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently
selected from the group consisting of Pro,
homoproline, 3Hyp, 4Hyp, thioproline,
N-alkylglycine, N-alkylpentylglycine and
N-alkylalanine; and
Z₂ is -OH or -NH₂;

provided that no more than three of Xaa₃, Xaa₅, Xaa₆, Xaa₈, Xaa₁₀, Xaa₁₁, Xaa₁₂, Xaa₁₃, Xaa₁₄,
Xaa₁₅, Xaa₁₆, Xaa₁₇, Xaa₁₉, Xaa₂₀, Xaa₂₁, Xaa₂₄, Xaa₂₅, Xaa₂₆, Xaa₂₇, and Xaa₂₈ are Ala; and

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pharmaceutically acceptable salts thereof.

2. (Withdrawn) A compound according to claim 1 wherein Xaa₁ is His or Tyr.
3. (Withdrawn) A compound according to claim 2 wherein Xaa₁ is His.
4. (Withdrawn) A compound according to claim 2 wherein Xaa₂ is Gly.
5. (Withdrawn) A compound according to claim 4 wherein Xaa₁₄ is Leu, pentylglycine or Met.
6. (Withdrawn) A compound according to claim 5 wherein Xaa₂₅ is Trp or Phe.
7. (Withdrawn) A compound according to claim 6 wherein Xaa₆ is Phe or naphthylalanine; and Xaa₂₂ is Phe or naphthylalanine; Xaa₂₃ is Ile or Val.
8. (Withdrawn) A compound according to claim 7 wherein Z₁ is -NH₂.
9. (Withdrawn) A compound according to claim 7 wherein Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently selected from the group consisting of Pro, homoproline, thioproline and N-alkylalanine.
10. (Withdrawn) A compound according to claim 9 wherein Z₂ is -NH₂.
11. (Withdrawn) A compound according to claim 1 wherein Xaa₂ is Gly.
12. (Withdrawn) A compound according to claim 1 wherein Xaa₁₄ is Leu, pentylglycine or Met.
13. (Withdrawn) A compound according to claim 1 wherein Xaa₂₅ is Trp or Phe.

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14. (Withdrawn) A compound according to claim 1 wherein Xaa₆ is Phe or naphthylalanine; Xaa₂₂ is Phe or naphthylalanine; Xaa₂₃ is Ile or Val.

15. (Withdrawn) A compound according to claim 1 wherein Z₁ is -NH₂.

16. (Withdrawn) A compound according to claim 1 wherein Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently selected from the group consisting of Pro, homoproline, thioproline and N-alkylalanine.

17. (Withdrawn) A compound according to claim 1 wherein Z₂ is -NH₂.

18. (Withdrawn) A compound according to claim 1 which has an amino acid sequence selected from SEQ. ID. NOS. 5 to 65.

19. (Withdrawn) A peptide compound of the formula (I) [SEQ. ID. NO. 4]:

Xaa₁ Xaa₂ Xaa₃ Gly Xaa₅ Xaa₆ Xaa₇ Xaa₈ Xaa₉ Xaa₁₀
Xaa₁₁ Xaa₁₂ Xaa₁₃ Xaa₁₄ Xaa₁₅ Xaa₁₆ Xaa₁₇ Ala Xaa₁₈ Xaa₁₉
Xaa₂₀ Xaa₂₁ Xaa₂₂ Xaa₂₃ Xaa₂₄ Xaa₂₅ Xaa₂₆ Xaa₂₇ Xaa₂₈-Z₁;

wherein

Xaa₁ is His or Arg;

Xaa₂ is Gly or Ala;

Xaa₃ is Asp or Glu;

Xaa₅ is Ala or Thr;

Xaa₆ is Ala, Phe or naphthylalanine;

Xaa₇ is Thr or Ser;

Xaa₈ is Ala, Ser or Thr;

Xaa₉ is Asp or Glu;

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Xaa₁₀ is Ala, Leu or pentylglycine;

Xaa₁₁ is Ala or Ser;

Xaa₁₂ is Ala or Lys;

Xaa₁₃ is Ala or Gln;

Xaa₁₄ is Ala, Leu or pentylglycine;

Xaa₁₅ is Ala or Glu;

Xaa₁₆ is Ala or Glu;

Xaa₁₇ is Ala or Glu;

Xaa₁₉ is Ala or Val;

Xaa₂₀ is Ala or Arg;

Xaa₂₁ is Ala or Leu;

Xaa₂₂ is Phe or naphthylalanine;

Xaa₂₃ is Ile, Val or tert-butylglycine;

Xaa₂₄ is Ala, Glu or Asp;

Xaa₂₅ is Ala, Trp, or Phe;

Xaa₂₆ is Ala or Leu;

Xaa₂₇ is Ala or Lys;

Xaa₂₈ is Ala or Asn;

Z₁ is -OH,

-NH₂,

Gly-Z₂,

Gly Gly -Z₂,

Gly Gly Xaa₃₁-Z₂,

Gly Gly Xaa₃₁ Ser-Z₂,

Gly Gly Xaa₃₁ Ser Ser-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂ or Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆

Xaa₃₇ Xaa₃₈-Z₂;

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Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently selected from the group consisting of Pro, homoproline, thioproline and N-methylalanine; and
Z₂ is -OH or -NH₂;

provided that no more than three of Xaa₃, Xaa₅, Xaa₆, Xaa₈, Xaa₁₀, Xaa₁₁, Xaa₁₂, Xaa₁₃, Xaa₁₄, Xaa₁₅, Xaa₁₆, Xaa₁₇, Xaa₁₉, Xaa₂₀, Xaa₂₁, Xaa₂₄, Xaa₂₅, Xaa₂₆, Xaa₂₇ and Xaa₂₈ are Ala; and
pharmaceutically acceptable salts thereof.

20. (Withdrawn) A compound according to claim 19 which has an amino acid sequence selected from SEQ. ID. NOS. 6-19.

21. (Withdrawn) A composition comprising a compound of any of claims 1 to 19 in a pharmaceutically acceptable carrier.

22. (Withdrawn) A composition comprising a compound of claim 20 in a pharmaceutically acceptable carrier.

23. (Withdrawn) A method for the treatment of diabetes mellitus comprising the administration of a therapeutically effective amount of a compound according to claim 1.

24. (Withdrawn) A method for the treatment of diabetes mellitus comprising the administration of a therapeutically effective amount of a compound according to claim 18.

25. (Withdrawn) A method for the treatment of diabetes mellitus comprising the administration of a therapeutically effective amount of a compound according to claim 19.

26. (Withdrawn) A method for the treatment of diabetes mellitus comprising the administration of a therapeutically effective amount of a compound according to claim 20.

27. (Withdrawn) The method of claim 23 further comprising the administration of a therapeutically effective amount of an insulin.

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28. (Withdrawn) The method of claim 24 further comprising the administration of a therapeutically effective amount of an insulin.

29. (Withdrawn) The method of claim 25 further comprising the administration of a therapeutically effective amount of an insulin.

30. (Withdrawn) The method of claim 26 further comprising the administration of a therapeutically effective amount of an insulin.

31. (Withdrawn) A method for the treatment of a hyperglycemic condition in a mammal comprising the step of administering a therapeutically effective amount of a compound according to claim 1.

32. (Withdrawn) A method for the treatment of a hyperglycemic condition in a mammal comprising the step of administering a therapeutically effective amount of a compound according to claim 18.

33. (Withdrawn) A method for the treatment of a hypoglycemic condition in a mammal comprising the step of administering a therapeutically effective amount of a compound according to claim 19.

34. (Withdrawn) A method for the treatment of a hypoglycemic condition in a mammal comprising the step of administering a therapeutically effective amount of a compound according to claim 20.

35. (Withdrawn) A peptide compound of the formula (II) [SEQ. ID. NO. 66]:

5 10

Xaa₁ Xaa₂ Xaa₃ Gly Xaa₅ Xaa₆ Xaa₇ Xaa₈ Xaa₉ Xaa₁₀

Xaa₁₁ Xaa₁₂ Xaa₁₃ Xaa₁₄ Xaa₁₅ Xaa₁₆ Xaa₁₇ Ala Xaa₁₉ Xaa₂₀

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Xaa₂₁ Xaa₂₂ Xaa₂₃ Xaa₂₄ Xaa₂₅ Xaa₂₆ X₁-Z₁; wherein

Xaa₁ is His, Arg or Tyr or 4-imidazopropionyl;

Xaa₂ is Ser, Gly, Ala or Thr;

Xaa₃ is Asp or Glu;

Xaa₅ is Ala or Thr;

Xaa₆ is Ala, Phe, Tyr or naphthylalanine;

Xaa₇ is Thr or Ser;

Xaa₈ is Ala, Ser or Thr;

Xaa₉ is Asp or Glu;

Xaa₁₀ is Ala, Leu, Ile, Val, pentylglycine or Met;

Xaa₁₁ is Ala or Ser;

Xaa₁₂ is Ala or Lys;

Xaa₁₃ is Ala or Gln;

Xaa₁₄ is Ala, Leu, Ile, pentylglycine, Val or Met;

Xaa₁₅ is Ala or Glu;

Xaa₁₆ is Ala or Glu;

Xaa₁₇ is Ala or Glu;

Xaa₁₉ is Ala or Val;

Xaa₂₀ is Ala or Arg;

Xaa₂₁ is Ala, Leu or Lys-NH[□]-R where R is Lys, Arg, C₁-C₁₀ straight chain or branched alkanoyl or cycloalkylkanoyl;

Xaa₂₂ is Phe, Tyr or naphthylalanine;

Xaa₂₃ is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met;

Xaa₂₄ is Ala, Glu or Asp;

Xaa₂₅ is Ala, Trp, Phe, Tyr or naphthylalanine;

Xaa₂₆ is Ala or Leu;

X₁ is Lys Asn, Asn Lys, Lys-NH[□]-R Asn, Asn Lys-NHⁱ¹-R, Lys-NH[□]-R Ala, Ala Lys-NH[□]-R where R is Lys, Arg, C₁-C₁₀ straight chain or branched alkanoyl or cycloalkylalkanoyl

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Z₁ is -OH,

-NH₂,

Gly-Z₂,

Gly Gly-Z₂

Gly Gly Xaa₃₁-Z₂,

Gly Gly Xaa₃₁ Ser-Z₂,

Gly Gly Xaa₃₁ Ser Ser-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂,

Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂ or

Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈-Z₂; wherein

Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently

selected from the group consisting of Pro,

homoproline, 3Hyp, 4Hyp, thioproline,

N-alkylglycine, N-alkylpentylglycine and

N-alkylalanine; and

Z₂ is -OH or -NH₂;

provided that no more than three of Xaa₃, Xaa₅, Xaa₆, Xaa₈, Xaa₁₀, Xaa₁₁, Xaa₁₂, Xaa₁₃, Xaa₁₄, Xaa₁₅, Xaa₁₆, Xaa₁₇, Xaa₁₉, Xaa₂₀, Xaa₂₁, Xaa₂₄, Xaa₂₅, and Xaa₂₆ are Ala; and pharmaceutically acceptable salts thereof.

36. (Withdrawn) A compound according to claim 35 wherein Xaa₁ is His, Tyr or 4-imidazopropionyl.

37. (Withdrawn) A compound according to claim 36 wherein Xaa₁ is His.

38. (Withdrawn) A compound according to claim 36 wherein Xaa₁ is 4-imidazopropionyl.

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39. (Withdrawn) A compound according to claim 35 wherein Xaa₂ is Gly.
40. (Withdrawn) A compound according to claim 35 wherein Xaa₁₄ is Leu, pentylglycine or Met.
41. (Withdrawn) A compound according to claim 35 wherein Xaa₂₅ is Trp or Phe.
42. (Withdrawn) A compound according to claim 35 wherein Xaa₆ is Phe or naphthylalanine; Xaa₂₂ is Phe or naphthylalanine; and Xaa₂₃ is Ile or Val.
43. (Withdrawn) A compound according to claim 35 wherein Z₁ is -NH₂.
44. (Withdrawn) A compound according to claim 35 wherein Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently selected from the group consisting of Pro, homoproline, thioproline and N-alkylalanine.
45. (Withdrawn) A compound according to claim 35 wherein Z₂ is -NH₂.
46. (Withdrawn) A compound according to claim 35 wherein X₁ is Lys Asn, Lys-NH^ε-R Asn, or Lys-NH^ε-R Ala where R is Lys, Arg, C₁-C₁₀ straight chain or branched alkanoyl.
47. (Withdrawn) A compound according to claim 35 wherein Xaa₂₁ is Lys-NH^ε-R where R is Lys, Arg, C₁-C₁₀ straight chain or branched alkanoyl or cycloalkylkanoyl.
48. (Withdrawn) A compound according to claim 35 wherein said compound has an amino acid sequence selected from SEQ. ID. NOS. 67-74.
49. (Withdrawn) A composition comprising a compound of any of claims 35-47 in a pharmaceutically acceptable carrier.

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50. (Withdrawn) A composition comprising a compound of claim 48 in a pharmaceutically acceptable carrier.
51. (New) An exendin peptide compound of SEQ ID NO:29.
52. (New) A composition comprising a compound of claim 51 in a pharmaceutically acceptable carrier.
53. (New) A method for the treatment of diabetes mellitus comprising the administration of a therapeutically effective amount of a compound according to claim 51.
54. (New) The method of claim 53, further comprising the administration of a therapeutically effective amount of an insulin.